

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	9	milner.in. and polysulfide	US-PGPUB; USPAT; USOCR; EPO; JPO	ADJ	ON	2006/08/10 12:53
S2	10	seki.in. and polysulfide	US-PGPUB; USPAT; USOCR; EPO; JPO	ADJ	ON	2006/08/10 12:54
S3	7	S2 not S1	US-PGPUB; USPAT; USOCR; EPO; JPO	ADJ	ON	2006/08/10 12:53
S4	5	sheets.in. and polysulfide	US-PGPUB; USPAT; USOCR; EPO; JPO	ADJ	ON	2006/08/10 12:54
S5	0	S4 not S1 not S2	US-PGPUB; USPAT; USOCR; EPO; JPO	ADJ	ON	2006/08/10 12:54
S6	3	yatsunami.in. and polysulfide	US-PGPUB; USPAT; USOCR; EPO; JPO	ADJ	ON	2006/08/10 12:55
S7	2	ethyl.asn. and hydrocarbyl polysulfide and dihydrocarbyl dithiophosphate	US-PGPUB; USPAT; USOCR; EPO; JPO	ADJ	ON	2006/08/10 12:56
S8	1	hydrocarbyl near2 polysulfide and dihydrocarbyl near2 dithiophosphate and dihydrocarbyl (mono)thiophosphate near2 amine	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/10 13:24
S9	1	hydrocarbyl near2 polysulfide and dihydrocarbyl near2 dithiophosphate and dihydrocarbyl near2 thiophosphate near2 amine	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/10 13:09
S10	1	di-t-butyl polysulfide and dihydrocarbyl near2 dithiophosphate and dihydrocarbyl near2 thiophosphate near2 amine	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/10 13:45
S11	1	di-t-butyl polysulfide and dihydrocarbyl near2 dithiophosphate and dihydrocarbyl near2 thiophosphate	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/10 13:22

## EAST Search History

S12	4	(di-t-butyl polysulfide or hydrocarbyl polysulfide) and (dihydrocarbyl near2 dithiophosphate or dihydrocarbyl near2 thiophosphate)	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/10 13:22
S13	3	hydrocarbyl near2 polysulfide and dihydrocarbyl near2 dithiophosphate and dihydrocarbyl (mono)thiophosphate near2 amine	EPO; JPO; DERWENT	ADJ	ON	2006/08/10 13:26
S14	2	((("5942470") or ("6133207"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/08/10 13:26
S15	2	(di-t-butyl polysulfide or hydrocarbyl near2 polysulfide) and dihydrocarbyl near2 dithiophosphate and (dihydrocarbyl near2 thiophosphate near2 amine) or ((dibutyl hydrogen thiophosphate same sulfur same amine) or (dibutylhydrogen thiophosphate same sulfur same amine))	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/10 13:54
S16	0	(di-t-butyl polysulfide or hydrocarbyl near2 polysulfide) and dihydrocarbyl near2 dithiophosphate and (dihydrocarbyl near2 thiophosphate near2 amine) and ((dibutyl hydrogen thiophosphate same sulfur same amine) or (dibutylhydrogen thiophosphate same sulfur same amine))	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/10 13:54
S17	1	(di-t-butyl polysulfide or hydrocarbyl near2 polysulfide) and dihydrocarbyl near2 dithiophosphate and ((dihydrocarbyl near2 thiophosphate near2 amine) or ((dibutyl hydrogen thiophosphate same sulfur same amine) or (dibutylhydrogen thiophosphate same sulfur same amine)))	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/10 13:54
S18	14	(di-t-butyl polysulfide or hydrocarbyl near2 polysulfide) and dihydrocarbyl near2 dithiophosphate or ((dihydrocarbyl near2 thiophosphate near2 amine) or ((dibutyl hydrogen thiophosphate same sulfur same amine) or (dibutylhydrogen thiophosphate same sulfur same amine)))	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/10 15:02

## EAST Search History

S19	282	(polysulfide) and dihydrocarbyl near2 dithiophosphate or ((dihydrocarbyl near2 thiophosphate near2 amine) or ((dibutyl hydrogen thiophosphate same sulfur same amine) or (dibutylhydrogen thiophosphate same sulfur same amine)))	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/10 15:03
S20	1	(polysulfide) and dihydrocarbyl near2 dithiophosphate and ((dihydrocarbyl near2 thiophosphate near2 amine) or ((dibutyl hydrogen thiophosphate same sulfur same amine) or (dibutylhydrogen thiophosphate same sulfur same amine)))	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/10 15:02
S21	1	(polysulfide) and (dihydrocarbyl near2 dithiophosphate or ((dihydrocarbyl near2 thiophosphate near2 amine) or ((dibutyl hydrogen thiophosphate same sulfur same amine) or (dibutylhydrogen thiophosphate same sulfur same amine)))) and (lubricate or lubricant or lubricating) and t-butyl polysulfide	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/11 12:34
S22	25	polysulfide and dithiophosphate near3 (ester or salt) and (dibutylhydrogen or dibutyl hydrogen) adj phosphite	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/11 14:44
S23	0	polysulfide and dithiophosphate near3 (ester or salt) and (dibutylhydrogen or dibutyl hydrogen) adj phosphite	EPO; JPO; DERWENT	ADJ	ON	2006/08/11 13:31
S24	0	polysulfide and dithiophosphate near3 (ester or salt) and (dibutylhydrogen or dibutyl hydrogen) near2 phosphite	EPO; JPO; DERWENT	ADJ	ON	2006/08/11 13:31
S25	19	polysulfide and dithiophosphate near3 (ester or salt) or (dibutylhydrogen or dibutyl hydrogen) near2 phosphite	EPO; JPO; DERWENT	ADJ	ON	2006/08/11 13:31
S26	330	dithiophosphate near3 (ester or salt) and (gear or transmission or hydraulic) near2 (oil or fluid or lubrica\$)	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/11 14:45
S27	150	dithiophosphate near3 (ester or salt) and (gear or transmission or hydraulic) near2 (oil or fluid or lubrica\$) and polysulfide	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/11 14:45

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S28	43	dithiophosphate near3 (ester or salt) and (gear or transmission or hydraulic) near2 (oil or fluid or lubrica\$) and dicyclopentadiene	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/11 14:46
S29	4	dithiophosphate near3 (ester or salt) and (gear or transmission or hydraulic) near2 (oil or fluid or lubrica\$) and dicyclopentadiene and dialkyldithiophosphoric	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/11 14:46
S30	150	dithiophosphate near3 (ester or salt) and (gear or transmission or hydraulic) near2 (oil or fluid or lubrica\$) and polysulfide	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/11 16:26
S31	4	hydrocarbyl near2 dithiophosphate near3 (ester or salt) and (gear or transmission or hydraulic) near2 (oil or fluid or lubrica\$) and polysulfide	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/11 16:28
S32	16	hydrocarbyl near2 polysulfide and (mono near2 thiophosphate or monothiophosphate or dibutylhydrogen phosphite or dibutyl hydrogen phosphite)	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/11 16:42
S33	41	((("2945749") or ("3235498") or ("3235499") or ("3235501") or ("3235502") or ("3087936") or ("3254025") or ("3281428") or ("3282955") or ("2284409") or ("2284410") or ("3338832") or ("3344069") or ("3533945") or ("3658836") or ("3703536") or ("3718663") or ("4455243") or ("4652387"))).PN.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2006/08/11 16:42
S34	42	((("3163603") or ("3184474") or ("3215707") or ("3219666") or ("3271310") or ("3272746") or ("3281357") or ("3306908") or ("3311558") or ("3316177") or ("3340281") or ("3341542") or ("3346493") or ("3381022") or ("3399141") or ("3415750") or ("3433744") or ("3444170") or ("3448048"))).PN.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2006/08/11 16:45

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S35	38	((("3448049") or ("3451933") or ("3454607") or ("3467668") or ("3522179") or ("3541012") or ("3542678") or ("3547101") or ("3576743") or ("3630904") or ("3632510") or ("3632511") or ("3697428") or ("3725441") or ("3868330") or ("3948800") or ("4234435") or ("RE26433") or ("3172892"))).PN.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2006/08/11 16:47
S36	30	((("3997454") or ("3202678") or ("3216936") or ("3329658") or ("3449250") or ("3493520") or ("3519565") or ("3666730") or ("3687849") or ("3702300") or ("2459112") or ("2962442") or ("2984550") or ("3036003") or ("3166516"))).PN.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2006/08/11 16:48
S37	32	((("3236770") or ("3368972") or ("3413347") or ("3442808") or ("3448047") or ("3454497") or ("3459661") or ("3539633") or ("3558743") or ("3586629") or ("3591598") or ("3600372") or ("3634515") or ("3649229") or ("3697574") or ("3704308") or ("3725277"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/08/11 16:51
S38	25	((("3725480") or ("3726882") or ("3736357") or ("3751365") or ("3756953") or ("3793202") or ("3798165") or ("3798247") or ("3803039") or ("3872019") or ("3957746") or ("3980569") or ("3985802") or ("4006089") or ("4011380") or ("4025451") or ("4058468") or ("4083699") or ("4090854"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/08/11 16:52
S39	5	((("3904595") or ("4354950") or ("4485023") or ("5034018"))).PN.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2006/08/11 16:53
S40	169	crankcase and dihydrocarbyl near2 dithiophosphate near2 (ester or salt) same (antiwear or anti-wear or antioxidant)	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 08:53
S41	1	"5498355".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2006/08/14 10:15

## EAST Search History

S42	8	mono near4 thiophosphate near3 dihydrocarbyl near5 amine near4 salt and (lubricate or lubricant or lubricating)	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 17:48
S43	4	(dihydrocarbyl or hydrocarbyl) near4 (trisulfide and disulfide and tetrasulfide)	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 12:43
S44	50	polysulfide and copper corrosion test	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 12:04
S45	22	polysulfide near5 (alkyl or hydrocarbyl or dihydrocarbyl) and copper corrosion test	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 12:41
S46	6	copper corrosion test near5 sulfur	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 12:41
S47	4	(dihydrocarbyl or hydrocarbyl) near4 ((trisulfide and disulfide and tetrasulfide) or (disulfide and tri-sulfide or tetra-sulfide))	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 12:44
S48	11	(dihydrocarbyl or hydrocarbyl or alkyl) near4 ((trisulfide and disulfide and tetrasulfide) or (disulfide and tri-sulfide and tetra-sulfide))	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 13:13
S49	7	S48 not S43	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 12:47
S50	13	phosphite same (monothiophosphate or mono near3 thiophosphate) near4 amine	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 12:53
S51	11	phosphite same (thiophosphate) near4 amine near2 salt	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 12:53
S52	12	(dihydrocarbyl or hydrocarbyl or alkyl) near4 ((trisulfide and disulfide and tetrasulfide) or (di-sulfide and tri-sulfide and tetra-sulfide))	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 13:16
S53	1	S52 not S48	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	OFF	2006/08/14 13:15
S54	0	(dihydrocarbyl or hydrocarbyl or alkyl) near4 ((trisulfide and disulfide and tetrasulfide) or (di-sulfide and tri-sulfide and tetra-sulfide))	FPRS; EPO; JPO; DERWENT	ADJ	ON	2006/08/14 13:16

## EAST Search History

S55	279	(dihydrocarbyl or hydrocarbyl or alkyl) same ((trisulfide and disulfide and tetrasulfide) or (di-sulfide and tri-sulfide and tetra-sulfide))	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 13:24
S56	30	(dihydrocarbyl or hydrocarbyl or alkyl) near7 ((trisulfide and disulfide and tetrasulfide) or (di-sulfide and tri-sulfide and tetra-sulfide))	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 13:16
S57	18	S56 not S52	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 13:17
S58	69	(dihydrocarbyl or hydrocarbyl or alkyl) same ((trisulfide and disulfide and tetrasulfide) or (di-sulfide and tri-sulfide and tetra-sulfide)) and (lubricate or lubricant or lubricating)	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 13:24
S59	61	S58 not S56 not S52	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 14:31
S60	1	(trisulfide or disulfide or tetrasulfide or tri-sulfide or di-sulfide or tetra-sulfide) near5 sulfur activity	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 14:32
S61	0	(trisulfide or disulfide or tetrasulfide or tri-sulfide or di-sulfide or tetra-sulfide) near5 copper corrosion test	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 15:26
S62	0	(trisulfide or disulfide or tetrasulfide or tri-sulfide or di-sulfide or tetra-sulfide) near7 copper corrosion test	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 14:33
S63	22	(trisulfide or disulfide or tetrasulfide or tri-sulfide or di-sulfide or tetra-sulfide) same copper corrosion test	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 15:09
S64	241	polysulfide and (sulfur or sulphur) near4 activity	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 15:09
S65	0	polysulfide and (sulfur or sulphur) near4 activity near2 mg	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 15:09
S66	115	polysulfide and (sulfur or sulphur) near2 activity	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 15:37
S67	32	polysulfide same (sulfur or sulphur) near2 activity	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 15:38

## EAST Search History

S68	3	polysulfide same (sulfur or sulphur) near2 activity	FPRS; EPO; JPO; DERWENT	ADJ	ON	2006/08/14 15:25
S69	2	copper corrosion test same (sulfur or sulphur) near3 activity	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 15:35
S70	2	copper corrosion test same (sulfur or sulphur) near3 activity	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 15:36
S71	83	S66 not S67	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 15:37
S72	328	polysulfide same (sulfur or sulphur) near2 (activity or active)	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 15:39
S73	153	polysulfide same (sulfur or sulphur) near2 (activity or active) and (lubricate or lubricant or lubricating)	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 16:53
S74	10	dicyclopentadiene and dialkyldithiophosphoric acid	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 15:50
S75	1	"5208382".pn.	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 17:27
S76	1	"5498355".pn.	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 17:31
S77	1	"5498355".pn.	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 17:34
S78	1	"5137980".pn.	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/14 17:45
S79	1	mono near4 thiophosphate near3 dihydrocarbyl near5 amine near4 salt and (lubricate or lubricant or lubricating)	FPRS; EPO; JPO; DERWENT	ADJ	ON	2006/08/14 18:21
S80	2	ep-744456-\$.did.	FPRS; EPO; JPO; DERWENT	ADJ	ON	2006/08/14 18:21
S81	0	dithiophosphate near7 dicyclopentadiene	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/15 13:32
S82	6	dithiophosphate same dicyclopentadiene	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/08/15 13:32



## EAST Search History

S83	1	508/195.ccls. and kinematic viscosity and polysulfide and (copper corrosion test or CCT) and dithiophosphate near5 (ester or salt) and thiophosphate amine	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/06/08 14:34
S84	262	hydraulic near5 crankcase and (oil or fluid or lubricant)	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/06/08 14:35